DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE–2019–BT–STD–0036]

RIN 1904-AE82

Energy Conservation Program: Energy Conservation Standards for Consumer Products; Early Assessment Review; Boilers

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Request for information.

SUMMARY: The U.S. Department of Energy (DOE) is undertaking an early assessment review for consumer boilers to determine whether to amend the applicable energy conservation standards for this product. Specifically, through this request for information (RFI), DOE seeks data and information to evaluate whether amended energy conservation standards would result in significant savings of energy, be technologically feasible, and be economically justified. DOE welcomes written comments from the public on any subject within the scope of this document (including those topics not specifically raised in this RFI), as well as the submission of data and other relevant information concerning this early assessment review.

DATES: Written comments and information are requested and will be accepted on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *http://www.regulations.gov*. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments by email to the following address: *E-mail*: *ConsumerBoilers2019STD0036@ee.doe.gov*. Include "Consumer Boilers RFI" and docket number EERE-2019-BT-STD-0036 and/or RIN 1904-AE82 in the subject line of the message. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or ASCII file format, and avoid the use of special characters or any form of encryption.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing Covid-19 pandemic. DOE is currently accepting only electronic submissions at this time. If a commenter finds that this change poses an undue hardship, please contact Appliance Standards Program staff at (202) 586-1445 to discuss the need for alternative arrangements. Once the Covid-19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

No telefacsimiles (faxes) will be accepted. For detailed instructions on submitting comments and additional information on this process, see section III of this document (Submission of Comments).

Docket: The docket for this activity, which includes *Federal Register* notices, comments, and other supporting documents/materials, is available for review at

http://www.regulations.gov. All documents in the docket are listed in the *http://www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket webpage can be found at: *http://www.regulations.gov/#!docketDetail;D=EERE-2019-BT-STD-0036*. The docket webpage contains instructions on how to access all documents, including public comments, in the docket. See section III of this document for information on how to submit comments through *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Ms. Catherine Rivest, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-7335. E-mail: *ApplianceStandardsQuestions@ee.doe.gov*.

Mr. Eric Stas, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-5827. E-mail: *Eric.Stas@hq.doe.gov*.

For further information on how to submit a comment or review other public comments and the docket, contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by e-mail: *ApplianceStandardsQuestions@ee.doe.gov*.

SUPPLEMENTARY INFORMATION:

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I. Introduction

DOE has established an early assessment review process to conduct a more focused analysis to evaluate, based on statutory criteria, whether a new or amended energy conservation standard is warranted. Based on the information received in response to the RFI and DOE's own analysis, DOE will determine whether to proceed with a rulemaking for a new or amended energy conservation standard. If DOE makes an initial determination that a new or amended energy conservation standard would satisfy the applicable statutory criteria or DOE's analysis is inconclusive, DOE would undertake the preliminary stages of a rulemaking to issue a new or amended energy conservation standard. Otherwise, if DOE makes an initial determination based upon available evidence that a new or amended energy conservation standard would not meet the applicable statutory criteria, DOE would engage in notice and comment rulemaking before issuing a final determination that new or amended energy conservation standards are not warranted.

A. Authority

The Energy Policy and Conservation Act, as amended (EPCA),[1] among other things, authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291-6317) Title III, Part B[2] of EPCA established the Energy Conservation Program for Consumer Products Other Than Automobiles. These products include consumer boilers, the subject of this document. (42 U.S.C. 6292(a)(5))

Under EPCA, DOE's energy conservation program consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291), test procedures (42 U.S.C. 6293), labeling provisions (42 U.S.C. 6294), energy conservation standards (42 U.S.C. 6295), and the authority to require information and reports from manufacturers (42 U.S.C. 6296).

Federal energy efficiency requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297(a)–(c)) DOE may, however, grant waivers of Federal preemption in limited instances for particular State laws or regulations, in accordance with the procedures and other provisions set forth under EPCA. (42 U.S.C. 6297(d))

DOE must follow specific statutory criteria for prescribing new or amended standards for covered products. EPCA requires that any new or amended energy

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[1] All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116-260 (Dec. 27, 2020).
[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

conservation standard prescribed by the Secretary of Energy (Secretary) be designed to achieve the maximum improvement in energy or water efficiency that is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) The Secretary may not prescribe an amended or new standard that will not result in significant conservation of energy or is not technologically feasible or economically justified. (42 U.S.C. 6295(o)(3))

EPCA requires that, no later than six years after the issuance of any final rule establishing or amending a standard, DOE evaluate the energy conservation standards for each type of covered product, including those at issue here, and publish either a notice of determination that the standards do not need to be amended, or a notice of proposed rulemaking (NOPR) that includes new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6295(m)(1)) DOE must make the analysis on which its notice if based publicly available and provide an opportunity for written comment. (42 U.S.C. 6295(m)(2)) DOE is issuing this early assessment review pursuant to the requirements of 42 U.S.C. 6295(m)(1).

B. Rulemaking History

EPCA established energy conservation standards for consumer furnaces and boilers in terms of the Annual Fuel Utilization Efficiency (AFUE) (42 U.S.C. 6295(f)(1)-(3)) and directed DOE to conduct a series of rulemakings to determine whether to amend these standards (42 U.S.C. 6295(f)(4); *see also* 42 U.S.C. 6295(m)). DOE completed the most recent rulemaking cycle to amend the standards for consumer boilers by publishing a final rule in the *Federal Register* on January 15, 2016 (January 2016 final rule), as required under 42 U.S.C. 6295(f)(4)(C). 81 FR 2320. The January 2016 final rule adopted new standby mode and off mode standards for consumer boilers in addition to

amended AFUE energy conservation standards. *Id.* Compliance with the new and amended standards for consumer boilers is required beginning January 15, 2021. *Id.* The current energy conservation standards for consumer boilers are located at title 10 of the Code of Federal Regulations (CFR) part 430, subpart C, section 32(e)(2). 10 CFR 430.32(e)(2). The currently applicable DOE test procedures for consumer boilers appear at 10 CFR part 430, subpart B, appendix N (Appendix N).

II. Request for Information and Comments

DOE is publishing this RFI to collect data and information during the early assessment review to inform its decision, consistent with its obligations under EPCA, as to whether the Department should proceed with an energy conservation standards rulemaking. Below DOE has identified certain topics for which information and data are requested to assist in the evaluation of the potential for amended energy conservation standards. DOE also welcomes comments on other issues relevant to its early assessment that may not specifically be identified in this document.

A. Product Classes

When evaluating and establishing energy conservation standards, DOE may divide covered products into product classes by the type of energy used, or by capacity or other performance-related features that justify a different standard. (42 U.S.C. 6295(q)). In making a determination whether capacity or another performance-related feature justifies a different standard, DOE must consider such factors as the utility of the feature to the consumer and other factors DOE deems appropriate. (*Id.*)

On January 15, 2021, DOE published a final interpretive rule determining that in

the context of residential furnaces, commercial water heaters, and similarly-situated products/equipment, use of non-condensing technology (and associated venting) constitutes a performance-related "feature" under EPCA that cannot be eliminated through adoption of an energy conservation standard. 86 FR 4776. Consumer boilers are similarly-situated products given that there are consumer boilers currently on the market which employ non-condensing technology (and the associated venting). In considering whether to amend the energy conservation standards for consumer boilers, DOE seeks information that would allow the agency to evaluate non-condensing technology (and the associated venting) consistent with the final interpretative rule, and whether a separate product class is warranted under 42 U.S.C. 6295(q)(1).

On this topic, DOE is particularly interested in comments, information, and data on the following:

Issue 1: DOE requests feedback on the current consumer boiler product classes and whether changes to these individual product classes and their descriptions should be made or whether certain classes should be separated or merged. Specifically, with regard to consumer boilers that use condensing technology, DOE requests information and data on potential impacts as compared to consumer boilers that use non-condensing technology, such as, but not limited to, the complexity/cost of installation, changes to a home's living/storage space, and the potential for fuel switching.

Issue 2: DOE also requests comment on other instances where it may be appropriate to separate or combine any of the existing product classes and whether such potential changes would impact product utility by eliminating any performance-related features or reduce any compliance burdens.

B. Significant Savings of Energy

On January 15, 2016, DOE established an energy conservation standard for consumer boilers that is expected to result in 0.14 quadrillion British thermal units (quads) of site energy savings over a 30-year period.[3] 81 FR 2320, 2396. The adopted levels can be met by consumer boilers using either condensing or noncondensing technology. Additionally, in the January 2016 final rule, DOE estimated that an energy conservation standard established at an energy efficiency level equivalent to that achieved using the maximum available technology (max-tech) would have resulted in 1.295 additional quads of site energy savings over a 30-year period. *Id.* For gas-fired hot water boilers and oil-fired hot water boilers, energy conservation standards at the max-tech levels analyzed in the January 2016 final rule could only be met by consumer boilers utilizing condensing technology (96 percent AFUE and 91 percent AFUE, respectively). 81 FR 2320, 2381 (Jan. 15, 2016). The majority of the additional potential energy savings were from the gas-fired hot water boiler product class.

Currently, based on information from the DOE Compliance Certification Management System (CCMS) certification database, non-condensing gas-fired hot water boilers range in AFUE from 84.0 percent to 86.1 percent, and condensing gas-fired hot water boilers range in AFUE from 88.3 percent to 96.8 percent. Based on the CCMS

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[3] This estimate of 0.14 quads reflects site energy savings, which for natural gas and oil are considered equal to the primary energy savings because they are supplied to the user without transformation from another form of energy. The January 2016 final rule presented the 30-year energy savings estimate as 0.16 quads, reflecting full-fuel-cycle (FFC) energy savings. The FFC measure includes point-of-use (site) energy; the energy losses associated with generation, transmission, and distribution of electricity; and the energy consumed in extracting, processing, and transporting or distributing primary fuels. For purposes of its consideration of significant energy savings, DOE has calculated its estimate of potential site energy savings from the estimate of FFC energy savings in the January 2016 final rule.

certification database, oil-fired hot water boilers currently on the market are non-condensing and range in AFUE from 86.0 to 88.2 percent. All gas-fired steam and oil-fired steam boilers in the CCMS certification database are non-condensing, ranging in AFUE from 82.0 to 83.4 and 85.0 to 86.5 percent, respectively.

While DOE's request for information is not limited to the following issues, DOE is particularly interested in comment, information, and data on the issues discussed in the following paragraphs.

As part of the rulemaking process, DOE conducts an energy use analysis to identify how products are used by consumers, which then allows the Department to determine the energy savings potential of energy efficiency improvements. The purpose of the energy use analysis is to determine the annual energy consumption of consumer boilers at different efficiencies in representative U.S. single-family homes, manufactured housing, multi-family residences, and commercial buildings, and to assess the energy savings potential of increased consumer boiler efficiency. The energy use analysis estimates the range of energy use of consumer boilers in the field (*i.e.*, as they are actually used by consumers). Furthermore, the energy use analysis provides the basis for other analyses DOE performs, particularly assessments of the energy savings and the savings in consumer operating costs that could result from adoption of amended or new standards, including the life-cycle cost (LCC) and payback period (PBP) analysis and the national impact analysis (NIA). DOE will estimate the annual energy consumption of consumer boilers at specified energy efficiency levels across a range of applications, house or building types, and climate zones. Similar to the January 2016 final rule, DOE intends to determine the annual energy consumption, including the use of natural gas,

liquefied petroleum gas (LPG), oil, or electricity for space and water heating,[4] as well as use of electricity for any auxiliary components.

Issue 3: DOE requests feedback on the levels of energy savings that could be expected from the adoption of a more-stringent standard for consumer boilers. Specifically, with regard to potential product class changes discussed in section II.A of this RFI, DOE requests information and data on the potential change in energy savings if certain classes are split or merged.

Issue 4: DOE seeks input and sources of data or recommendations to support sizing of consumer boilers typical in consumer space heating and water heating applications.

Issue 5: DOE requests comment on the fraction of installations and classes of consumer boilers that are used in commercial applications.

Issue 6: DOE seeks field data and input on representative space heating usage, space heating load profile, and representative return water temperatures for consumer boilers used in various consumer and commercial space heating applications.

Issue 7: DOE requests comment on the fraction of installations by consumer boiler product classes used for different space heating applications include radiant

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[4] Space heating applications for consumer boilers include radiant heating (*e.g.,* in-floor, radiant panels, radiators, baseboard) and forced air using fan coils or central air handlers. Domestic water heating applications for consumer boilers include indirect water heating, combination products, and tankless coil.

heating (in-floor, radiant panels, radiators, baseboards) and forced air using fan coils or central air handlers.

Issue 8: DOE seeks input on adjusting AFUE for different return water temperatures, for automatic means for adjusting water temperature, and for jacket losses. DOE seeks input on any other adjustments to AFUE to better capture field conditions. DOE also seeks data on the relationship between return water temperature and AFUE to more accurately calculate the return water temperature adjustment.

Issue 9: DOE seeks additional data on the fraction of boiler shipments that go to installations that serve both space heating and water heating by product class, by efficiency level or boiler technology type (*e.g.*, non-condensing and condensing), and type of water heating (*e.g.*, indirect tank water heating, combination products, and tankless coil).

C. Technological Feasibility

DOE considers technologies incorporated in commercially-available products or in working prototypes to be technologically feasible. 10 CFR part 430. subpart C, appendix A, sections 6(c)(3)(i) and 7(b)(1). In the rulemaking proceeding leading to the January 2016 final rule, DOE considered a number of technology options that manufacturers could use to reduce energy consumption in consumer boilers. 81 FR 2320, 2340-2341 (Jan. 15, 2016). Table II.1 shows the technologies previously considered for the January 2016 final rule.

Table II.1 Technology Options for Consumer Boilers Considered in the Development of the January 2016 Final Rule

Heat exchanger improvements
Modulating operation
Dampers†
Direct vent

Pulse combustion*
Premix burners
Burner derating*
Delayed-action oil pump solenoid valve
Electronic ignition†
Low-pressure air-atomized oil burner
Transformer improvements (standby mode and off mode)
Control relay for models with brushless permanent magnet motors (standby mode and off mode)*
Switching mode power supply (standby mode and off mode)

† Technology already in baseline units, so not considered further.

* Screened-out technology.

DOE seeks comment on any changes to these technology options that could affect DOE's evaluation of whether energy conservation standards need to be amended. DOE also seeks comment on whether there are any other technology options that DOE should consider in its analysis.

While DOE's request for information is not limited to the following issues, DOE is particularly interested in comment, information, and data on the following:

Issue 10: DOE seeks information on technologies that may impact the efficiency of consumer boilers as measured according to the DOE test procedure. DOE also seeks information on how these technologies may have changed since they were considered in the January 2016 final rule analysis. Specifically, DOE seeks information on the range of efficiencies or performance characteristics that are currently available for each technology option.

Issue 11: DOE seeks comment on other technology options that it should consider for inclusion in its analysis and whether these technologies would be expected to impact product features or consumer utility of consumer boilers.

DOE defines the max-tech efficiency level to represent the theoretical maximum possible efficiency if all available design options are incorporated in a model. In the January 2016 final rule, the max-tech efficiency levels for AFUE corresponded to the maximum available AFUE levels in products on the market at the time of the analysis (except for oil-fired hot water boilers for which the max-tech level was slightly below the maximum available level).[5] For standby mode and off mode energy consumption, the max-tech efficiency levels (*i.e.*, the levels with the lowest amount of energy consumption) were determined by starting with the baseline design and implementing design options based on cost-effectiveness until all available technologies were employed.[6] At the time this RFI was drafted, based on data from the CCMS database, the maximum available AFUE efficiency levels currently on the market for the subject products are as follows: 86.1 percent for non-condensing gas-fired hot water boilers, 96.8 percent for condensing gas-fired hot water boilers, 88.2 percent for oil-fired hot water boilers (which are all non-condensing), 83.4 percent for gas-fired steam boilers (which are all non-condensing), and 86.5 percent oil-fired steam boilers (which are all non-condensing). In the January 2016 final rule, DOE identified the max-tech level for standby mode and off mode consumption as follows: 9 watts for gas-fired hot water boilers; 8 watts for gas-fired steam, electric hot water, and electric steam boilers; and 11 watts for oil-fired hot water and oil-fired steam boilers. 81 FR 2320, 2345-2346 (Jan. 15, 2016).

Issue 12: DOE seeks input on whether the maximum available AFUE efficiency levels are appropriate and technologically feasible for potential consideration as possible

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[5] See the technical support document for the January 2016 final rule, Chapter 3, section 3.2.9 and chapter 5, section 5.4.4. Available at: *https://www.regulations.gov/document/EERE-2012-BT-STD-0047-0070*.
[6] See the technical support document for the January 2016 final rule, chapter 5, section 5.4.2. Available at: *https://www.regulations.gov/document/EERE-2012-BT-STD-0047-0070*.

energy conservation standards – and if not, why not. DOE also seeks feedback on the design options incorporated at max-tech efficiency levels. As part of this request, DOE also seeks information as to whether there are limitations on the use of certain combinations of design options.

Issue 13: DOE seeks input on the max-tech standby mode and off mode efficiency levels. In particular, are more-stringent (*i.e.*, lower) standby mode and off mode efficiency levels technologically feasible that are appropriate for consideration as possible energy conservation standards, and if so, what are the design options incorporated at those levels. DOE also seeks information as to whether there are limitations on the use of certain combinations of design options.

D. Economic Justification

In determining whether a proposed energy conservation standard is economically justified, DOE analyzes, among other things, the potential economic impact on consumers, manufacturers, and the Nation. DOE seeks comment on whether there are economic barriers to the adoption of more-stringent energy conservation standards for consumer boilers. DOE also seeks comment and data on any other aspects of its economic justification analysis from the January 2016 final rule that may indicate whether a more-stringent energy conservation standard would be economically justified or cost-effective.

While DOE's request for information is not limited to the following issues, DOE is particularly interested in comment, information, and data on the issues discussed in the following paragraphs.

In its analysis, DOE intends to take into account consumer prices from locations where ultra-low-NOx gas-fired hot water and steam boilers would be required by the compliance date for any amended standards, such as the Bay Area Air Quality Management District (AQMD) (Regulation 9, Rule 6),[7] Sacramento Metropolitan AQMD (Rule 414),[8] San Joaquin Valley Air Pollution Control District (APCD) (Rule 4308),[9] Santa Barbara County APCD (Rule 360),[10] South Coast AQMD (Rule 1146.2),[11] and Ventura County AQMD (Rule 74-11.1).[12]

Issue 14: DOE seeks input on whether there are additional jurisdictions requiring ultra-low-NOx gas-fired hot water and steam boilers.

In the January 2016 final rule, to determine the venting installation costs for consumer boilers, DOE considered vent categories as defined in the National Fuel Gas Code.[13] 81 FR 2320, 2359-2361 (Jan. 15, 2016). In its analysis, DOE determined that all natural draft boilers and a fraction of mechanical draft boilers would be vented as a

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[7] Bay Area Air Quality Management District, Regulation 9: Inorganic Gaseous Pollutants; Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters (Available at: *https://ww3.arb.ca.gov/drdb/ba/curhtml/r9-6.pdf*) (Last accessed October 30, 2019).

[8] Sacramento Metropolitan Air Quality Management District, Rule 414: Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 BTU PER HOUR Adopted 08-01-96 (Amended 03-25-10) (Available at: *http://www.airquality.org/ProgramCoordination/Documents/rule414.pdf*) (Last accessed October 30, 2019).

[9] San Joaquin Valley Air Pollution Control District, Rule 4308: Boilers, Steam Generators, and Process Heaters – 0.075 MMBtu/hr to less than 2.0 MMBtu/hr (Adopted October 20, 2005, amended December 17, 2009, Amended November 14, 2013) (Available at: *https://www.valleyair.org/rules/currntrules/03-4308_CleanRule.pdf*) (Last accessed October 30, 2019).

[10] Santa Barbara County Air Pollution Control District, Rule 360: Boilers, Steam Generators, and Process Heaters (0.075 - 2 MMBtu/hr) (Adopted 10/17/2002, revised 3/15/2018) (Available at: *https://www.ourair.org/wp-content/uploads/rule360.pdf*) (Last accessed October 30, 2019).

[11] South Coast Air Quality Management District, Rule 1146.2: Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters (Adopted January 9, 1998, amended January 7, 2005, amended May 5, 2006, amended December 7, 2018) (Available at: *http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1146-2.pdf?sfvrsn=17*) (Last accessed October 30, 2019).

[12] Ventura County Air Quality Management District, Rule 74-11.1: Large Water Heaters and Small Boilers (Adopted 9/14/99, revised 9/11/12) (Available at: *http://vcapcd.org/Rulebook/Reg4/RULE%2074.11.1.pdf*) (Last accessed October 30, 2019).

[13] Available at: *https://catalog.nfpa.org/NFPA-54ANSI-Z2231-National-Fuel-Gas-Code-P1184.aspx* (Last accessed March 5, 2021).

Category I appliance (negative pressure vent system with high temperature flue gases). DOE determined that the remaining fraction of mechanical draft boilers would be vented as a Category III appliance (positive pressure vent system with high temperature flue gases). DOE determined that very few non-condensing models would be installed as a Category II appliance (negative pressure vent system with low temperature flue gases) or a Category IV appliance (positive pressure vent system with low flue gases temperatures). However, DOE determined that all condensing installations would be vented as a Category IV appliance. For non-condensing boilers, DOE accounted for both commonly-vented consumer boilers (together with a water heater) and isolated consumer boilers (separately vented). For replacements, DOE added any costs associated with updating or repairing existing flue venting including vent resizing, chimney relining, and updating of flue vent connectors. DOE also accounted for additional labor costs associated with larger boilers, replacing a larger drain pan, and potential space-constraint issues when the original boiler location is too small to accommodate the replacement boiler. For efficiency levels that include electronic ignition, power vent, or condensing design, DOE added the cost of installing an electrical outlet, a new venting system, any additional cost for condensate disposal, any additional costs for secondary and primary piping, and cost of a Y-strainer, if required for a fraction of installations.

In the January 2016 final rule, DOE also included installation adders for new construction, as well as for new owner installations for hot water gas-fired boilers. 81 FR 2320, 2361 (Jan. 15, 2016). For non-condensing boilers, the only adder would be a new metal flue vent (including a fraction with stainless steel venting) and condensate withdrawal for a fraction of category III models. For condensing gas boilers, the additional costs for new construction installations related to potential amended standards

would include a new flue vent, combustion air venting for direct vent installations and accounting for a commonly-vented water heater, and condensate withdrawal.

Issue 15: DOE seeks input on issues and costs associated with venting of flue gases of boilers, in particular regarding retrofit issues related to installing a new vent system for higher-efficiency consumer boilers, disconnecting the existing consumer boiler from a non-condensing common venting system, and upgrading existing non-condensing venting (chimney relining or vent resizing). DOE also seeks input on how often and in what applications direct venting or sealed combustion are used or required.

Issue 16: DOE seeks input on issues and costs associated with condensate disposal for higher-efficiency consumer boilers, specifically how often and in what applications a condensate filter or a condensate pump is installed.

Issue 17: DOE seeks input on issues and costs associated with installing consumer boilers in multi-family buildings.

DOE measures LCC and PBP impacts of potential standard levels relative to a no-new-standards case that reflects the likely market in the absence of amended standards. Similar to the 2016 final rule, DOE plans to develop market-share efficiency data (*i.e.*, the distribution of product shipments by efficiency) for the product classes DOE is considering, for the year in which compliance with any potential amended standards would be required. For the 2016 final rule, DOE developed market shares of different consumer boiler energy efficiency levels in the no-new-standards case, using historical shipments data provided by stakeholders, data from the Air-Conditioning, Heating and Refrigeration Institute (AHRI) contractor survey, and ENERGY STAR unit shipment

data for residential boilers.[14] 81 FR 2320, 2364-2366 (Jan. 15, 2016). If DOE determines that a rulemaking is necessary, DOE intends to use the most recent data available from these sources, together with any more current data that may be provided by stakeholders. Also similar to the January 2016 final rule, because these data may not cover all of the energy efficiency levels under consideration, DOE intends to use most the recent data on the number of water heater models at different energy efficiency levels, as reported in DOE's compliance certification database,[15] the AHRI directory of certified product performance,[16] the California Energy Commission appliance efficiency database,[17] and the ENERGY STAR certified boiler directory.[18]

Issue 18: DOE requests shipments data for consumer boilers, broken down by product class, that show current market shares by efficiency level. DOE also seeks input on similar historic data from 2016-2020.

Issue 19: DOE also requests information on expected future trends in efficiency for consumer boiler product classes, including the relative market shares of condensing versus non-condensing products in the market for gas-fired and oil-fired hot water boilers in the absence of amended efficiency standards.

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[14] ENERGY STAR, Unit Shipments data (Available at: http://www.energystar.gov/index.cfm?c=partners.unit_shipment_data) (Last accessed October 30, 2019).
[15] U.S. Department of Energy, Compliance Certification Database (Available at: https://www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A*) (Last accessed October 30, 2019).
[16] Air-Conditioning Heating and Refrigeration Institute, Directory of Certified Product Performance for Residential Boilers (Available at: *https://www.ahridirectory.org/NewSearch?programId=25&searchTypeId=3*) (Last accessed October 30, 2019).
[17] California Energy Commission (CEC), Appliance Efficiency Database. (Available at: https://cacertappliances.energy.ca.gov/Pages/ApplianceSearch.aspx) (Last accessed October 30, 2019).
[18] ENERGY STAR, ENERGY STAR Certified Boilers Directory (Available at: https://www.energystar.gov/productfinder/product/certified-boilers/results) (Last accessed October 30, 2019).

Issue 20: DOE requests 2016-2020 data on the fraction of sales in the residential and commercial sector for consumer boilers.

Issue 21: DOE requests comment on the anticipated future market share of higher-efficiency products, such as condensing gas-fired and oil-fired hot water boilers, as compared to less-efficient products for each consumer boiler product class.

III. Submission of Comments

DOE invites all interested parties to submit in writing by the date specified under the **DATES** heading of this document, comments and information on matters addressed in this RFI and on other matters relevant to DOE's early assessment of whether more-stringent energy conservation standards are warranted for consumer boilers.

Submitting comments via http://www.regulations.gov. The *http://www.regulations.gov* webpage requires you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any

document attached to your comment. If this instruction is followed, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

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Include contact information each time you submit comments, data, documents, and other information to DOE. Telefacsimiles (faxes) will not be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, written in English, and free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: one copy of the document marked "confidential" including all the information believed to be confidential, and one copy of the document marked "non-confidential" with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

DOE considers public participation to be a very important part of the process for developing test procedures and energy conservation standards. DOE actively encourages the participation and interaction of the public during the comment period in each stage of this process. Interactions with and between members of the public provide a balanced discussion of the issues and assist DOE in the process. Anyone who wishes to be added to the DOE mailing list to receive future notices and information about this process should contact Appliance and Equipment Standards Program staff at (202) 287-1445 or via e-mail at *ApplianceStandardsQuestions@ee.doe.gov*.

Signing Authority

This document of the Department of Energy was signed on March 18, 2021, by Kelly Speakes-Backman, Principal Deputy Assistant Secretary and Acting Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, D.C., on March 19, 2021

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Treena V. Garrett
Federal Register Liaison Officer,
U.S. Department of Energy

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